

Remarks

This Application has been carefully reviewed in light of the Office Action mailed December 14, 2004. Although Applicants believe all claims are allowable without amendment, Applicants have amended Claims 1-2, 4-6, 12, 14-19, and 23 to correct various minor errors and to clarify various recited limitations. At least some of these amendments are not narrowing. At least some of these amendments are not necessary for patentability. Applicants respectfully request reconsideration and allowance of all pending claims.

Dependent Claim 16 is Definite Under Paragraph 2 of 35 U.S.C. § 112

The Examiner rejects dependent Claim 16 under 35 U.S.C. § 112 para. 2 as being indefinite. Applicants have amended dependent Claim 16 to recite *the third segment*, which has an antecedent basis in independent Claim 14 through dependent Claim 15. Applicants respectfully submit that dependent Claim 16 is definite under 35 U.S.C. § 112 para. 2. Accordingly, Applicants respectfully request reconsideration and allowance of dependent Claim 16.

Independent Claims 1 and 14 are Allowable Over *Denman*

The Examiner rejects independent Claims 1 and 14 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,490,451 to Denman et al. ("*Denman*").

Denman merely discloses a core network (CN) that includes a wireless mobility server (WMS), a wireless access gateway (WAG), an anchor packet gateway (APG), and a PSTN trunking media gateway (PTMG). (Figure 2 and Column 6, Line 36, through Column 7, Line 57). Bearer data from a radio access network (RAN) travels from the RAN to the WAG, then from the WAG to the APG, and then from the APG to the PTMG and on to the Public Switched Telephone Network (PSTN), which is outside the CN. (Figure 3). In *Denman*, to effect a hard handoff between a source WAG in the CN and a target WAG, the WMS in the CN takes down an RTP stream between the APG in the CN and the source WAG in the CN. (Column 25, Lines 44-59). The WMS also establishes an RTP stream

between the APG in the CN and the target WAG. (Column 24, Line 66, through Column 25 Line 11).

In contrast, independent Claim 1 of the present Application, as amended, recites:

A system for performing a hand-off between two internet protocol (IP) core networks in a wireless domain, comprising:

a source mobility control function (MCF) within a source IP core network, the source IP core network coupled to a source access network providing service to a mobile unit;

the source MCF coupled to a source bearer path gateway (BPGW), the source BPGW being within the source IP core network and operable to communicate bearer traffic associated with the mobile unit between the source access network and a public switched telephone network (PSTN) gateway within the source IP core network, the PSTN gateway operable to communicate the bearer traffic between the source BPGW and a PSTN coupled to the source IP core network;

the source MCF being functionally separate from a call agent (CA) within the source IP core network, the CA coupled to the source BPGW and operable to set up a first segment of a bearer path for the bearer traffic between the source BPGW and the PSTN gateway;

the source MCF operable to set up a second segment of the bearer path for the bearer traffic between the source access network and the source BPGW;

the source MCF further operable to take down the second segment and set up third and fourth segments of the bearer path for the bearer traffic in response to the mobile unit entering a service area of a target access network coupled to a target IP core network, the third segment being between the source BPGW and a target BPGW within the target IP core network, the fourth segment being between the target access network and the target BPGW, the target BPGW operable to communicate the bearer traffic between the target access network and the source BPGW, resulting in a hand-off between the source IP core network and the target IP core network in the wireless domain.

Independent Claim 14 recites limitations substantially similar to the limitations recited in independent Claim 1.

To reject independent Claim 1, the Examiner asserts that the APG in the CN in *Denman* can be properly considered **a source BPGW**, as recited in independent Claim 1. Applicants respectfully disagree with the Examiner. In *Denman*, a hard handoff between a source WAG in the CN and a target WAG establishes an RTP stream between the APG in

the CN and the target WAG. Nowhere does *Denman* disclose, teach, or suggest that the APG in the CN communicates with a target counterpart outside the CN, such as a target APG outside the CN. In contrast, *the source BPGW* communicates from *within a source IP core network* with *a target BPGW within a target IP core network* after a *handoff between the source IP core network and the target IP core network*, as recited in independent Claim 1. Neither can the source WAG in the CN in *Denman* be properly considered *a source BPGW*, as recited in independent Claim 1. In *Denman*, a hard handoff between a source WAG in the CN and a target WAG takes down an RTP stream between the source WAG in the CN and the APG in the CN, at which point the source WAG in the CN no longer communicates with a PTMG in the CN providing access to the PSTN. In contrast, *a first segment of a bearer path for bearer traffic between the source BPGW and a PSTN gateway within a source IP core network* remains in place after *a handoff between the source IP core network and a target IP core network*, as recited in independent Claim 1.

Because *Denman* fails to disclose, teach, or suggest *a source BPGW*, as recited in independent Claim 1, *Denman* also necessarily fails to disclose, teach, or suggest *a source MCF* that is, as recited in independent Claim 1:

- *coupled to the source BPGW*;
- *operable to set up a second segment of a bearer path for bearer traffic between a source access network and the source BPGW*; and
- *further operable to take down the second segment and set up third and fourth segments of the bearer path for the bearer traffic in response to a mobile unit entering a service area of a target access network coupled to a target IP core network, the third segment being between the source BPGW and a target BPGW within the target IP core network, the fourth segment being between the target access network and the target BPGW.*

For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claims 1 and 14 and all their dependent claims.

Independent Claim 12 is Allowable Over *Denman*

The Examiner rejects independent Claim 12 under 35 U.S.C. §102(e) as being anticipated by *Denman*.

Independent Claim 12 of the present Application, as amended, recites:

A system for performing a hand-off between two internet protocol (IP) core networks in a wireless domain, comprising:

a target mobility control function (MCF) within a target IP core network, the target IP core network coupled to a target access network;

the target MCF operable to receive a request from a source MCF within a source IP core network to set up a segment of a bearer path for bearer traffic associated with a mobile unit within a service area of the target access network, the bearer path being between the target access network and a target bearer path gateway (BPGW) coupled to the target MCF within the target IP core network and operable to communicate the bearer traffic between the target access network and a source BPGW, the source BPGW being within the source IP core network and operable to communicate the bearer traffic between the target BPGW and a source public switched telephone network (PSTN) gateway within the source IP core network operable to communicate the bearer traffic between the source BPGW and a PSTN coupled to the source IP core network;

the target MCF further operable to set up the segment in response to the request.

To reject independent Claim 12, the Examiner asserts that the WMS in the CN in *Denman* can be properly considered **a target MCF**, as recited in independent Claim 12. Applicants respectfully disagree with the Examiner. In *Denman*, to effect a hard handoff, the WMS in the CN establishes an RTP stream between the APG in the CN and a target WAG. Nowhere does *Denman* disclose, teach, or suggest that the WMS in the CN has a counterpart outside the CN. Even assuming for the sake of argument the RTP stream could be properly considered **a segment of a bearer path for bearer traffic**, as recited in independent Claim 12, *Denman* would still fail to disclose, teach, or suggest that the WMS in the CN establishes the RTP stream **in response to a request** from such a counterpart outside the CN, as recited in independent Claim 12.

For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claim 12 and its dependent claim.

**Independent Claim 23 is Allowable Over the Proposed
Denman-RFC-Almgren Combination**

The Examiner rejects independent Claim 23 under 35 U.S.C. § 103(a) as being unpatentable over *Denman* in view of IETF RFC 2543 ("*RFC*") and in further view of U.S. Patent No. 6,668,175 to Almgren et al. ("*Almgren*").

Independent Claim 23 of the present Application, as amended, recites:

A system for performing a hand-off between two internet protocol (IP) core networks in a wireless domain, comprising:

a source mobility control function (MCF) within a universal mobile telecommunications system (UMTS) source IP core network, the source IP core network coupled to a source third-generation (3G) radio access network (RAN) providing service to a mobile unit;

the source MCF coupled to a source bearer path gateway (BPGW), the source BPGW being within the source IP core network and operable to communicate bearer traffic associated with the mobile unit between the source access network and a public switched telephone network (PSTN) gateway within the source IP core network, the PSTN gateway operable to communicate the bearer traffic between the source BPGW and a PSTN coupled to the source IP core network;

the source MCF being functionally separate from a call agent (CA) within the source IP core network, the CA coupled to the source BPGW and operable to set up a first segment of a bearer path for the bearer traffic between the source BPGW and the PSTN gateway, signaling traffic associated with the mobile unit being communicated between the source MCF and the CA using sessions initiation protocol (SIP);

the source MCF operable to set up a second segment of the bearer path for the bearer traffic between the source RAN and the source BPGW using media gateway control protocol (MGCP);

the source MCF further operable to take down the second segment using MGCP and set up third and fourth segments of the bearer path for the bearer traffic in response to the mobile unit entering a service area of a target 3G RAN coupled to a target UMTS IP core network, the third segment being between the source BPGW and a target BPGW within the target IP core network, the fourth segment being between the target 3G RAN and the target BPGW, the target BPGW operable to communicate the bearer traffic between the target access network and the source BPGW, resulting in a hand-off between the source IP core network and the target IP core network in the wireless domain.

To reject independent Claim 23, the Examiner asserts that the APG in the CN in *Denman* can be properly considered **a source BPGW**, as recited in independent Claim 23. Applicants respectfully disagree with the Examiner. As discussed above, in *Denman*, a hard handoff between a source WAG in the CN and a target WAG establishes an RTP stream between the APG in the CN and the target WAG. Nowhere does *Denman* disclose, teach, or suggest that the APG in the CN communicates with a target counterpart outside the CN, such as a target APG outside the CN. In contrast, **the source BPGW communicates from within a source IP core network with a target BPGW within a target IP core network after a handoff between the source IP core network and the target IP core network**, as recited in independent Claim 23. Neither can the source WAG in the CN in *Denman* be properly considered **a source BPGW**, as recited in independent Claim 23. As discussed above, in *Denman*, a hard handoff between a source WAG in the CN and a target WAG takes down an RTP stream between the source WAG in the CN and the APG in the CN, at which point the source WAG in the CN no longer communicates with a PTMG in the CN providing access to the PSTN. In contrast, **a first segment of a bearer path for bearer traffic between the source BPGW and a PSTN gateway within a source IP core network remains in place after a handoff between the source IP core network and a target IP core network**, as recited in independent Claim 1.

Because *Denman* fails to disclose, teach, or suggest **a source BPGW**, as recited in independent Claim 1, *Denman* also necessarily fails to disclose, teach, or suggest **a source MCF** that is, as recited in independent Claim 1:

- **coupled to the source BPGW**;
- **operable to set up a second segment of a bearer path for bearer traffic between a source RAN and the source BPGW**; and
- **further operable to take down the second segment and set up third and fourth segments of the bearer path for the bearer traffic in response to the mobile unit entering a service area of a target 3G RAN coupled to a target UMTS IP core network, the third segment being between the source BPGW and a target BPGW within the target IP core network, the fourth segment being between the target 3G RAN and the target BPGW.**

Assuming for the sake of argument that *RFC* and *Almgren* could be combined with *Denman* as the Examiner proposes, neither *RFC* nor *Almgren* would make up for any of the deficiencies of *Denman* discussed above. Applicants note that the Examiner does not assert that *RFC* or *Almgren* disclose, teach, or suggest the limitations discussed above that Applicants have demonstrated are absent from *Denman*.

For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claim 23.

Conclusion

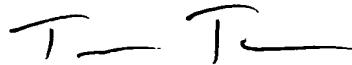
For at least the foregoing reasons, Applicants respectfully request full allowance of all pending claims.

If the Examiner believes that a telephone conference would advance prosecution of this Application, the Examiner is invited to call Travis W. Thomas, Attorney for Applicants, at 214-953-6676.

Applicants believe no fees are due, the Commissioner is hereby authorized to charge any additional fees or credit any overpayments to Deposit Account No. 02-0384 of BAKER BOTTS L.L.P.

Respectfully submitted,

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